Study on Organosols. (III) : Mercury Organosols Obtained by a Chemical Method

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28. Study on Organosols. (III)

Mercury Organosols Obtained by a Chemical Method.

Itsuro Yamakita and *Fuku Takenaka.*

In the authors' laboratory, various methods of preparing organosols were discovered about 20 years ago, and these methods were utilized for the manufacture of colloidal medicines and ship's bottom paints. Besides these studies in the applied field, fundamental researches on gold and silver organosols formed by a chemical method were carried out and their results were already reported.

In this report, some experimental facts as to mercvry organosols formed by the same chemical method above mentioned using mercuric oxide as staring substance, are described.

The possibility of formation of mercury organosols in various organic dispersing media such as fats, oils and homologous series of fatty acids were examined. It was confirmed that the coexistence of free fatty acids is essential for the formation of mercury organosol in the case of fats and oils.

In any cases examined, so finely dispersed mercury organosols as in the case of gold and silver organosols were not obtained. Particle size of dispersed mercury was determinee by a micrometer and it was recognized that its range of magnitude is from 0.25 μ to 6 μ and this particle size corresponds to that of general emulsions.

The viscosity of mercury organosols was measured and it was found that the relation between the concentration of dispersed mercury particles and the viscosity of the sol is linear, and the coefficent for the rate of viscosity increment varied from 2.52 (at 53°C) to 5.44 (at 13°C). From this point, the condition of dispersed mercury in dispersing media was deduced from Einstein's viscosity equation.

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29. On the Decolorization of Rice-waxoil.

Itsuro Yamakita and *Tetsuro Yamauchi.*

Many studies have been reported on the purification of rice oil difficult to decolor. One of the authors already pointed out that rice-oil of high acid value dissolved iron with which it comes into contact during its production and storage, and the oil was greatly contaminated by the dissolved iron.

In this study we compared quantitatively decolorizations of rice-waxoil treated with various methods separately or combined.

Rice-waxoil, which deposited in crude rice-oil, was melted and filtered from such impurities contained in oil as rice-bran. Thus treated rice-waxoil was dissolved